

BACKGROUND MEMORANDUM

TO: Members, Subcommittee on
Energy and Mineral Resources

FROM: Bill Condit, Staff Director
John Rishel, Legislative Staff

DATE: March 19, 2001

SUBJECT: Oversight Hearing on “**Estimated Oil and Gas Resource Base on Federal Land and Submerged Land: *How Much Oil and Gas Can These Lands Produce?***”

The Subcommittee on Energy and Mineral Resources is scheduled to meet on **Thursday, March 22, 2001 at 2:00 P.M. in Room 1334, Longworth House Office Building** to hold a hearing on “Estimated Oil and Gas Resource Base on Federal Land and Submerged Land: How Much Oil and Gas Can These Lands Produce?”

BACKGROUND

Current Situation

Oil and natural gas provide almost 65 percent of the energy Americans use. Though alternative energy sources are gaining in importance, oil and gas will continue to be a major energy source for several generations to come. The U.S. Energy Information Agency (EIA) forecasts that by 2020 domestic petroleum demand will increase 33 percent and natural gas demand will increase 62 percent, even after healthy increases in renewable energy supplies (26%) and energy efficiency (29%).

The United States is experiencing a steep decline in oil production. Domestic crude oil production now averages about 5.8 million barrels per day – a rate not seen since the early 1950's. Presently, Americans consume 19.5 million barrels of oil per day with transportation uses accounting for 67 percent of consumption. The shortfall is supplied by foreign imports, primarily from OPEC nations (46%). The Persian Gulf region supplies 23 percent of U.S. oil needs.

Americans consume about 22 trillion cubic feet of natural gas annually, accounting for more than 23 percent of their energy use. Domestic production is 18.6 trillion cubic feet of gas yearly, ranking the U.S. as the world's second largest natural gas producer. Canada supplies the shortfall, about one-sixth of U.S. natural gas consumption, making it the largest energy supplier to the United States.

The United States is experiencing critical shortages of natural gas and record high prices. Presently, increases in gas demand are outpacing production, which has fallen 14 percent since 1973. Near term demand will continue to rise, driven by the increased use of gas to generate electricity. Gas currently accounts for 15 percent of electricity generation, but gas use in electric generation rises to 21 percent during the peak summer months. Of the 250,000 megawatts of proposed electric generation capacity additions in the United States, over 95 percent is gas-fired. The United States is clearly staking its ability to meet increased demand for electricity on having adequate supplies of natural gas.

U.S. Domestic Oil and Natural Gas Resource Base

This hearing, one of a series to investigate the oil and natural gas potential of public lands and the Outer Continental Shelf (OCS), will focus on federal estimates of this nation's oil and gas resource base. Many geologists and petroleum engineers, who work in America's oil and gas industry, believe that significant oil and gas reserves remain in the U.S. At this hearing, the two federal agencies responsible for producing estimates of our oil and natural gas resource base, the U.S. Geological Survey (USGS) and the Minerals Management Service (MMS), will testify about their estimate of how much oil and gas we have and where they believe we are most likely to find these resources.

The USGS is responsible for periodically assessing the oil and gas resources onshore and under state waters (within the three mile limit). In their last full-scale assessment in 1995, the USGS estimated that the area onshore and under state waters had 112 billion barrels of technically recoverable oil and over 1,000 trillion cubic feet of technically recoverable gas resources. They believe that 70 percent of the oil and 43 percent of the gas will be squeezed out of existing fields using advanced technology. It should be noted that these estimates include private and state-owned lands as well as the onshore federal lands. The web-based summary of the 1995 national assessment may be accessed via this link: <http://greenwood.cr.usgs.gov/energy/execsum.html>

MMS periodically assesses the oil and natural gas resource base of the federal offshore, i.e., the outer continental shelf or OCS (beyond the three-mile limit). The federal OCS consists of 1.5 billion acres of which about 200 million acres are presently available for oil and gas leasing. The MMS believes that the OCS contains roughly one-third of the nation's undiscovered oil and gas resources.

In their last full-scale assessment in 2000, the MMS estimated that the OCS mean resource base is 75 billion barrels of oil and 362 trillion cubic feet of gas. From the 1995 assessment, these mean estimates increased by 29 billion barrels of oil and 94 trillion cubic feet of gas. Most of the increase is attributable to recent deep water exploration results in the Gulf of Mexico. An Adobe Acrobat-formatted 12 page summary of the 2000 assessment is attached to this briefing paper.

Inventory of Onshore Public Lands Oil and Gas Resources

Section 604 of P.L. 106- 469, the Energy Act of 2000, mandates that the Secretary of the Interior, in consultation with the Secretaries of Agriculture and Energy, conduct an inventory of all onshore Federal lands. The inventory shall identify (1) the United States Geological Survey reserve estimates of the oil and gas resources underlying these lands; and (2) the extent and nature of any restrictions or impediments to the development of such resources. Furthermore, the inventory of estimated resources and restrictions in development thereto is to be updated periodically, in recognition of new resource assessment data and /or changing restrictions on access to these resources.

This inventory will aid Congress in decision-making with respect to access to public lands prospectively valuable for oil and gas resources. The coastal plain of the Arctic National Wildlife Refuge (ANWR) provides an excellent example why this inventory is necessary. The assessment methodology used by the USGS in estimating the undiscovered oil and gas resources in ANWR is excellent. However, none of these resources are presently available for development due to land use restrictions. Inclusion of this data in the national oil and gas assessments will alert Congress to areas where changes in land-use restrictions can make the most “bang for the energy buck.”

EXPECTED WITNESSES

Three witnesses are scheduled to testify: (1) Dr. P. Pat Leahy, Associate Director for Geology, U.S. Geological Survey; (2) Ms. Carolita Kallaur, Associate Director, Offshore Minerals Management, Minerals Management Service; and (3) Dr. Naresh Kumar testifying on behalf of the American Association of Petroleum Geologists (AAPG), an organization of oil and gas geoscientists. AAPG provides advice to the USGS and MMS on methodology for oil and gas resource estimation and geological characteristics of oil and gas fields in hydrocarbon producing areas.

For further information, please contact Bill Condit at x59297 or John Rishel at x60242.

Attachments: Witness List

Summary of MMS’ 2000 Assessment of OCS Oil & Gas Resources